



Puget Sound Clean Air Agency

Notice of
Construction No. **10107**

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH

Registration No. **10088**
Date

Addition of air-to-fuel ratio controls and 3-way catalysts for each of four Waukesha L5790G- 600 HP raw sewage pump internal combustion engines, Nos. 401, 402, 403 and 404, fueled with biogas pre-scrubbed for hydrogen sulfide and siloxane, with propane as backup emergency fuel. This Order also includes a change in the units of measure from g/bhp-hr to ppm at 15% O₂ for emissions of NO_x and CO.

OWNER

**King Co Ntrl Res Wastewater Treatment
1400 Utah St W
Seattle, WA 98199**

INSTALLATION ADDRESS

**King Co Ntrl Res Wastewater Treatment
1400 Utah St W (West Point)
Seattle, WA 98199**

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.
2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.
3. The emissions from each of the raw sewage pump engines (401, 402, 403 and 404) when burning digester gas or propane shall not exceed:
178 ppmv CO @ 15% O₂
62 ppmv NOX @ 15% O₂
4. The owner or operator shall perform periodic monitoring and performance testing to demonstrate compliance with the emission limits in condition 3 for each of the four raw sewage pump engines while burning digester gas as described in this condition:
 - a. The periodic monitoring shall measure CO, NO_x and O₂ concentrations at the outlet of each engine and be performed at least every 700 hours of operation for each engine. The initial periodic monitoring required by this Order of Approval must be conducted within 120 days of the issuance of this Order of Approval.
 - b. All periodic monitoring shall be performed with a portable electrochemical analyzer and follow EPA test method CTM-034. Three identical runs must be performed on each engine. Unless otherwise approved by the Agency, each run must consist of at least a two minute test phase followed by eight minutes of refresh.
 - c. At least once every 60 months, and at any other time required by the Agency, the owner or operator must conduct a performance test on each of the four engines to show compliance with the emission limits in condition 3 using EPA methods 7E, 10, 3A, and/or other test methods required by the Agency. The four engines may be tested at the same time, however the owner or operator can choose to test the engines separately or in any combination. An initial test on each of the four engines must be performed no more than 60 months after the issuance of this Order of Approval. Each test shall include three identical 60-minute runs performed on each engine. Following completion of the initial test, each successive engine performance test must be performed within 60 months of the previous

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- test on that engine.
- d. During each test and monitoring event, the wastewater incoming flow rate, the engine output (in percent), the amount of fuel used, and any activities or non-typical operation shall be recorded. The Agency may require additional parameters to be recorded. The engines must be operating at least at 50% of rated output during all monitoring and testing.
 - e. Within 21 days of completion, a periodic monitoring report shall be submitted to the Agency for each monitoring event. The report must include all results of the monitoring, values of all parameters required to be recorded under condition 4.d. of this Order of Approval, all corrective action taken and maintenance performed associated with the monitoring, and all other relevant information.
 - f. Within 60 days of completion, a performance test report shall be submitted to the Agency for each performance test. The report must include all results of the testing values of all parameters required to be recorded under condition 4.d. of this Order of Approval, all corrective action taken and maintenance performed associated with the performance test and all other relevant information.
 - g. All performance tests must comply with Regulation I, Article 3.07.
 - h. Periodic monitoring does not need to comply with Regulation I, Article 3.07 unless otherwise required by the Agency.
5. The raw sewage pump engines (401, 402, 403, and 404) shall be fired only with digester gas that has been scrubbed of hydrogen sulfide and siloxane; or fired with propane. Propane usage for each engine cannot exceed 500 hours over each 12-month rolling period.
 6. For each engine, the owner or operator shall record the number of hours burning propane and the number of hours burning digester gas during each rolling consecutive 12-month period.
 7. The owner or operator shall submit a written report to the Agency for each calendar quarter identifying the number of hours propane was used during the previous 12-month rolling period. The report must be submitted to the Agency within 30 days of the last day of the calendar quarter. The report shall include the list of engines that used propane and the number of hours propane was used in each engine during the previous 12-month rolling period.
 8. The Agency may require testing of the emissions from the engines while running on propane at any time.
 9. The owner or operator shall maintain and operate all engines in accordance with manufacturer's recommendations. These recommendations must be included in the facility's O&M plan.
 10. This Order cancels and supersedes Order of Approval No. 5125, dated May 12, 1994, for three engines on the effective date of this Order.
 11. This Order cancels and supersedes Order of Approval No. 4655, dated August 25, 1992, for one engine on the effective date of this Order.

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

Carole Cenci
Reviewing Engineer

John Dawson
Engineering Manager